MV Wenatchee at outfitting pier.

MV Puyallup on the launchway.

MV Puyallup on the launchway.

Jumbo Mark II ferries under construction at Todd Shipyard in Seattle, 1990's.

The construction of the Jumbo Mark II ferries -- proven in service to be well-designed, efficient and reliable -- was one of the most successful construction projects ever performed by WSDOT.

Washington State Department of Transportation

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Unresolved Issues

- **The current schedule calls for the fourth ferry to start service in Biennium 2011-2013. In order to maintain continuity in procurement we need the date moved to Biennium 2007-2009.**

- **Engrossed Substitute House Bill (ESHB) 1163 requires an evaluation of financing mechanisms on existing vessels and for future ferry purchases to be completed by December 1, 2004.**

New Ferries for the Washington State Ferry System.

Washington State Ferries

Washington State Department of Transportation

January 2004

Washington State Ferries has begun the procurement for up to four new 1202 Passenger/ crew, 130 Car Ferries as directed by the State Legislature.

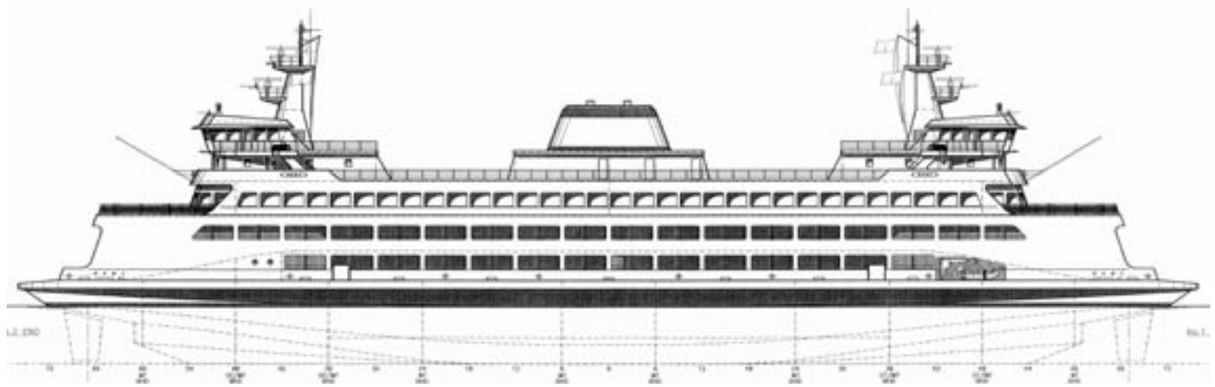
Washington State Ferries (WSF) operates a unique transportation system. In fiscal year 2003, WSF carried over 11 million vehicles and 25 million people to 20 separate destinations throughout Puget Sound. Forty percent of the passengers are commuters. With its 29-vessel fleet, it is the second largest transit system in the state. The ferry system is an essential part of western Washington's highway network, linking the east side of the Sound with growing communities to the west as well as the islands.

Washington State Ferries Status Report

Design and build Procurement Partnership for up to Four Auto Ferries

Washington State Ferries' goals in building new auto ferries are to provide reliable, efficient and environmentally progressive ferries that meet the needs of the riding public with a cost effective, competitive procurement process. In the effort to achieve these goals, the following factors and issues were considered.

- Standardization and commonality with the current fleet. These features reduce repair parts cost, standardize repair and maintenance procedures and the training of our crews.
- Provide redundancy in critical equipment and systems to enhance reliability.
- Achieve service speed of 17 knots at 70 to 80% of rated horsepower, to extend periods between overhauls, reduce fuel consumption and increase propulsion plant reliability. A reserve of power for speeds above 17 knots will be available to make up schedule delays. In addition, the similarity of the four new ferries to the current six ISSAQUAH ferries will enable the interchange of vessels when necessary.
- A vessel beam that allows dry-docking in more than one place in the Puget Sound area.
- Meet requirements of the State Environmental Policy Act.
- Build vessels with a life cycle of sixty years.
- Achieve an efficient, reliable propulsion system having commonality with other propulsion systems in the fleet.
- Achievement of the most efficient hull form. Performed Computational Fluid Dynamics optimization in Germany to determine hull form. Model testing currently underway in Sweden to verify and document performance. Resulting hull form has demonstrated significant improvement over the existing ISSAQUAH Class ferries. Preliminary results of the model test indicate a possible saving in fuel cost of between 1.25 and 2.5 million dollars per vessel over twenty years. (For four ferries this would constitute savings of 5 to 10 million dollars over twenty years.)
- Install facilities in vessels to enhance on board revenue.
- Adherence to recommendations for conformance to the Americans with Disabilities Act (ADA).
- Physical Security requirements.
- Availability of qualified shipyards in the Puget Sound area.
- Use the experience of naval architect firms to assist in the design of the vessels.
- Past experience from previous auto ferry construction projects.



Past Experience

Washington State Ferries has worked to continually use our past experience to improve our processes.

The Design and Build Procurement Partnership process which was signed into law in 2001 is based to a large extent upon past experience with vessel new construction projects including the JUMBO MKII project completed in 1999.

The Procurement Partnership is expected to improve our procurement process based upon our previous experience.

- Only two shipyards bid on JUMBO MKII. It is noted that the size of the vessels was a factor in limiting shipyard participation in the bidding. However, efforts should be made to have a minimum of three final bidders for maximizing competition.
- The state did not provide a price range for the project. This resulted in under estimating by the winning shipbuilder.
- Since the design and specifications were prepared completely by WSF, the shipbuilder had no involvement or ownership of the design. This relieved the shipbuilder of certain responsibilities for the final product.
- Production by the shipyard started too early and the detailed design by the shipyard fell behind.
- An auto ferry procurement project in the late 1970s used a design and build process without state participation in design and construction which resulted in vessels having serious maintenance and operational deficiencies that took the state twenty years and millions of dollars to correct.

Ships model upside down, showing the grid for the flow visualization with the Mariner Type Rudder in place.

Industry New Construction Process

The new construction process for the cruise ship industry, Alaska Marine Highways and the U.S. Navy consists of a design and build approach that includes the following:

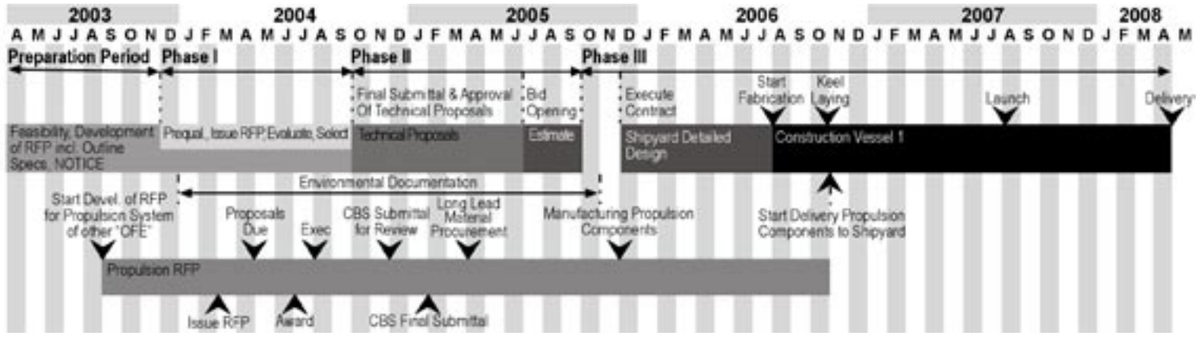
- Development of Outline Specifications by the owner.
- Request proposals worldwide (nationwide for Alaska and U. S. Navy).
- Submission by shipbuilders of initial proposals.
- Selection of a maximum of two or three best-qualified shipbuilders to develop designs and specifications.
- Award to proposer with the most advantageous proposal, not necessarily the low bidder.

Washington State Design Build Procurement Partnership per Substitute House Bill (SHB) 1680

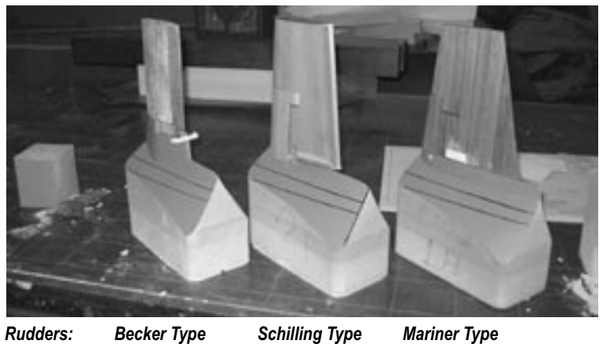
SHB 1680, which was signed into law and codified in RCW 47.60.810, provided for the following:

- Issue a modified RFP encompassing the various phases in the project.
- Vessels must be built in Washington State.
- State purchase of Owner Furnished Equipment (OFE), consisting of propulsion systems and ship service diesel generator sets. Funding requested from the Federal Transit Authority (FTA) and the Federal Highway Authority (FHWA) for OFE has been approved.
- Develop Outline Specifications by the state that provide requirements for the vessels. (WSF is including standards for quality as a requirement which is necessary since the low bidder is awarded the Construction Contract.) WSF is also preparing an Owner's Model Design as a necessary precursor to selection of OFE, and will include the Owner's Model Design in the RFP as an example of an acceptable design.
- Include the price range for the project.
- Prequalify prospective proposers.
- Select of a preset maximum number of the best qualified from prequalified proposers for development of technical proposals. (The preset maximum number of best-qualified proposers to be selected will be established in a forthcoming volume of the RFP.)
- Award the Construction Contract to the lowest bidder.
- Start vessel construction following WSF approval of detailed design drawings.

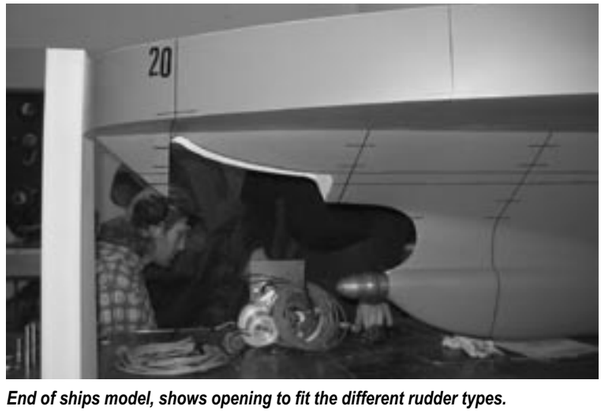
WSF Design and Construction Schedule



Event	Scheduled Date or Status
Volume IA, Prequalification Requirements	Issued December 3, 2003
Feasibility Studies	Essentially completed
Model Testing	In progress
FTA and FHWA Funding for Owner Furnished Equipment (OFE)	Approved
RFPs for OFE (propulsion systems and diesel generator sets)	To be issued March 04
RFP Volume IB, Phase I Proposal Requirements	To be issued Late February 2004
Special Prequalification Information due from prospective proposers	March 2004
WSF visits to shipyards to verify Special Prequalification Information	April 2004
Effective Date of WAC Rule Change	Early June 2004
Financial Prequalification Requirements per revised WAC Rule	To be issued June 8, 2004
Development of Outline Specifications and Owner's Model Design	June 8, 2004
Remaining RFP Volumes II through VI	To be issued June 8, 2004
Standard Prequalification Information and Commitment for Contract Security due from prospective proposers	June 15, 2004
Issuance of Letters Re: Total Prequalification Status	June 22, 2004
Prospective proposers submit Phase I proposals	August 2004
Select a preset maximum number of the best-qualified proposers to participate in Phase II, Development of Technical Proposals.	September 16, 2004
Commence Phase II, Development of Technical Proposals	September 20, 2004



Rudders: Becker Type Schilling Type Mariner Type



End of ships model, shows opening to fit the different rudder types.

Advantages of the Design Build Procurement Partnership

- Process uses strengths of both the shipyard and WSF and protects the interests of both.
  - WSF has in depth operational, engineering and maintenance ferry knowledge whereby it can establish requirements for needed vessel characteristics, standardization and commonality within the fleet; while
  - The shipbuilders are given the opportunity to utilize their strengths and participate as partners with WSF in the design and development of the specifications and drawings, and include aspects of the design and specifications that mesh with their building strategies (as influenced by shipyard facilities).
- Shipyard is involved in the development of specifications and the design, making the shipyard responsible for the final product. This minimizes cause for disputes.
- Shipyard risk of underestimating is minimized.
- This new ferry class of up to four vessels will be similar to the current ISSAQUAH class vessels, and the two classes consisting of a total of ten ferries will function as the everyday "work horses" in the fleet. Future ferry classes of this size and capacity can be based on the current new design which will only require updating for use in construction of future ferries.